67,200-1228
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IN THE CLAIMS

Please amend Claims 1,2,3,4,9,10,11,14,15,17 and 18.

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Listing of Claims

1. (currently amended) An electrochemical plating electrolyte solution, comprising:

an electrolyte bath solution; and

a polymer additive provided in said electrolyte bath solution, said polymer additive comprising polymers having a chemical formula of $CH_3(CH_2CHX)_m(CH_2CHYCH_2)_nCH_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of ~~said~~ an aromatic monomer and ~~said~~ an aromatic amine monomer, respectively, in ~~said~~ each of said polymers.

2. (currently amended) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic monomer comprises ~~a~~ an aromatic functional group selected from the group consisting of benzene and pyrrolidone.

3. (currently amended) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic amine monomer comprises ~~a~~ an aromatic amine functional group selected from the group consisting of imidazole and an imidazole derivative.

4. (currently amended) The electrochemical plating electrolyte solution of claim 3 wherein said aromatic monomer comprises ~~a~~ an aromatic functional group selected from the group consisting of benzene and pyrrolidone.

5. (cancelled)

6. (previously presented) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic functional group comprises a functional group selected from the group consisting of benzene and pyrrolidone.

7. (previously presented) The electrochemical plating electrolyte solution of claim 1 wherein said aromatic amine functional group comprises a functional group selected from the group consisting of imidazole and an imidazole derivative.

8. (previously presented) The electrochemical plating electrolyte solution of claim 7 wherein said aromatic functional group comprises a functional group selected from the group consisting of benzene and pyrrolidone.

9. (currently amended) An electrochemical plating electrolyte solution, comprising:

an electrolyte bath solution; and

a polymer additive provided in said electrolyte bath solution, said polymer additive comprising polymers having a chemical formula of $CH_3(CH_2CHX)_m(CH_2CHYCH_2)_nCH_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of ~~said~~ an aromatic monomer and ~~said~~ an amine monomer, respectively, in

said each of said polymers; and a cationic charge density of from about 1 meq/g to about 6 meq/g.

10. (currently amended) The electrochemical plating electrolyte solution of claim 9 wherein said aromatic monomer comprises ~~a~~ an aromatic functional group selected from the group consisting of benzene and ~~pyrollidone~~ pyrrolidone.

11. (currently amended) The electrochemical plating electrolyte solution of claim 9 wherein said aromatic ~~amine~~ monomer comprises ~~a~~ an aromatic amine functional group selected from the group consisting of imidazole and an imidazole derivative.

12. (cancelled)

13. (original) The electrochemical plating electrolyte solution of claim 9 wherein each of said polymers has a molecular weight of from about 2,000 to about 400,000.

14. (currently amended) The electroplating electrolyte solution of claim 13 wherein said aromatic monomer comprises ~~a~~ an aromatic functional group selected from the group consisting of benzene and ~~pyrollidone~~ pyrrolidone.

15. (currently amended) The electroplating electrolyte solution of claim 13 wherein said aromatic ~~amine~~ monomer

comprises ~~a~~ an aromatic amine functional group selected from the group consisting of imidazole and an imidazole derivative.

16. (cancelled)

17. (currently amended) A method of electroplating a metal on an electroplating surface, comprising the steps of:

providing an electrolyte bath solution;

mixing a polymer additive with said electrolyte bath solution, said polymer additive comprising polymers having a chemical formula of $CH_3(CH_2CHX)_m(CH_2CHYCH_2)_nCH_3$, where X is an aromatic functional group; Y is an aromatic amine functional group; and m and n are integers indicating numbers of ~~said~~ an aromatic monomer and ~~said~~ an amine monomer, respectively, in said each of said polymers;

immersing said electroplating surface in said electrolyte bath solution; and

electroplating said metal onto said electroplating surface.

18. (currently amended) The method of claim 17 wherein said aromatic monomer comprises ~~a~~ an aromatic functional group selected from the group consisting of benzene and ~~pyrollidone~~ pyrrolidone and ~~said~~ an aromatic amine monomer comprises ~~a~~ an aromatic amine functional group selected from the group consisting of imidazole and an imidazole derivative.

19. (cancelled)

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20. (original)The method of claim 17 wherein each of said polymers has a molecular weight of from about 2,000 to about 400,000 and a cationic charge density of from about 1 meq/g to about 6 meq/g.